

Notice of Independent Review Decision**DATE OF REVIEW:** 3/16/10**IRO CASE #:****DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE**

Electromyography and Nerve Conduction

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION

Certified by the American Board of Orthopedic Surgery

REVIEW OUTCOME

Upon independent review the reviewer finds that the previous adverse determination should be:

- ☒ Upheld (Agree)
- ☐ Overturned (Disagree)
- ☐ Partially Overturned (Agree in part/Disagree in part)

Injury date	Claim #	Review Type	ICD-9 DSMV	HCPCS/ NDC	Upheld/ Overturned
		Prospective	721.1	95860	Upheld

INFORMATION PROVIDED TO THE IRO FOR REVIEW

Correspondence throughout appeal process, including first and second level decision letters, reviews, letters and requests for reconsideration, and request for review by an independent review organization.

Physician/practitioner notes from 10/14/08 through 1/25/10

X-ray reports dated 1/25/10, 12/3/09, 10/16/08, 9/23/08

Reference articles

Practice Parameter for Needle Electromyographic Evaluation of Patients with Suspected Cervical Radiculopathy: Summary Statement

The Electrodiagnostic Evaluation of Patients with Suspected Cervical Radiculopathy:

Literature Review on the Usefulness of Needle Electromyography

Official Disability Guidelines cited – ODG/Neck Electrodiagnostic Studies

PATIENT CLINICAL HISTORY:

This is a patient whose date of injury is xx/xx/xx. The records indicate the patient works and was driving a work truck when he hit speed bump it threw him into the air causing him to hit his head on roof of truck. He noted immediately after the injury low back pain. The patient was treated with some physical therapy, pain medications, and anti-inflammatory medications. Three months later the patient began experiencing some leg complaints, with complaints of paresthesias and pain. Approximately 3-6 months after accident he began experiencing neck pain and progressing numbness in his arms. An MRI of the cervical spine dated 12/03/09 reported multilevel stenosis and spondylosis from C3-4 through C6-7. The patient was seen in consultation on 01/25/10 with chief complaint of neck and back pain with bilateral upper and lower extremity pain and paresthesias. Physical examination revealed the patient to be 5'11 ½" tall and 220 lbs. Examination of the extremities showed painless range of motion of upper and lower major joints. On neurologic exam the patient had normal heel to toe gait. He can toe and heel walk without difficulty. Palpation of the spine showed some tenderness in L4-5 area. He can flex 2 finger tips below the knees and he can extend, but he does have pain with extension. The patient has pain with side bending, no pain with rotation. He has 3+ reflexes bilaterally equal at knees and ankles. He has 2+ reflexes at biceps, triceps and brachioradialis bilaterally. The patient has pain with examination of EHL strength but does seem to have normal strength. Motor strength was 5/5 throughout bilateral upper and lower extremities. There was some suggestive sensory change in ulnar aspect of bilateral digits. There was some subjective change in sensation of left lateral thigh. There was no sustained clonus bilaterally. The patient did have left sided positive Hoffmann's sign. The patient is noted to have had cervical and lumbar epidural steroid injections which provided temporary relief the first time, but the next time he did not get any relief. It was recommended that the patient undergo cervical and/or upper and lower extremity EMG/NCV for evaluation of extremity complaints, and after that the patient will be evaluated for any further workup or surgical intervention.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDING CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION

In the Reviewer's opinion, based on the clinical information provided, the request for electromyography and nerve conduction studies is not supported as medically necessary. The patient sustained an injury on xx/xx/xx. He initially complained of low back pain and subsequently developed some leg complaints. The patient subsequent to that began experiencing neck pain with progression of arm complaints to include numbness of fingers and numbness in his arms. MRI of the cervical spine performed 12/03/09 revealed multilevel stenosis and spondylosis from C3-7. The patient's condition has been refractory to conservative treatment including cervical epidural steroid injections. On examination the patient had no motor deficits. He was noted to have some subjective loss or change in sensation in ulnar aspect of bilateral digits and some subjective change in sensation in left lateral thigh. The Reviewer noted that according to ODG, cervical spine electrodiagnostic testing is not as correlative with symptoms as

in the lumbar spine, and that electrodiagnostic studies were not necessary if clinical symptoms of radiculopathy are not established.

Reference:

1. 2010 Official Disability Guidelines, 15th edition, Work Loss Data Institute. Online edition, Neck and Upper Back Chapter.

Electromyography (EMG)

Recommended (needle, not surface) as an option in selected cases. The American Association of Electrodiagnostic Medicine conducted a review on electrodiagnosis in relation to cervical radiculopathy and concluded that the test was moderately sensitive (50%-71%) and highly specific (65%-85%). ([AAEM, 1999](#)) EMG findings may not be predictive of surgical outcome in cervical surgery, and patients may still benefit from surgery even in the absence of EMG findings of nerve root impingement. This is in stark contrast to the lumbar spine where EMG findings have been shown to be highly correlative with symptoms.

Positive diagnosis of radiculopathy: Requires the identification of neurogenic abnormalities in two or more muscles that share the same nerve root innervation but differ in their peripheral nerve supply.

Timing: Timing is important as nerve root compression will reflect as positive if active changes are occurring. Changes of denervation develop within the first to third week after compression (fibrillations and positive sharp waves develop first in the paraspinals at 7-10 days and in the limb muscles at 2-3 weeks), and reinnervation is found at about 3-6 months

Nerve conduction studies (NCS)

Not recommended. There is minimal justification for performing nerve conduction studies when a patient is presumed to have symptoms on the basis of radiculopathy. ([Utah, 2006](#)) See also the [Carpal Tunnel Syndrome Chapter](#) for more details on NCS. Studies have not shown portable nerve conduction devices to be effective.

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:

- ☐ ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE
- ☐ AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES
- ☐ DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES
- ☐ EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN
- ☐ INTERQUAL CRITERIA
- ☐ MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS
- ☐ MERCY CENTER CONSENSUS CONFERENCE GUIDELINES
- ☐ MILLIMAN CARE GUIDELINES
- ☒ ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES
- ☐ PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR
- ☐ TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS
- ☐ TEXAS TACADA GUIDELINES
- ☐ TMF SCREENING CRITERIA MANUAL
- ☐ PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)
- ☐ OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)